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Intellectual Development Systems is using updated World War II military intelligence tests to change the way children learn. Teachers swear by it.

Deconstructing the intellect

By Carleen Hawn



IDS founder and chairman, Bill Brock

"This is about preparing learners to learn." And making money, to boot.

AT THE HEIGHT of World War II the Army Air Corps was struggling to fill its ranks. There were plenty of volunteers, but despite rigorous health, stress and intelligence tests, one in three cadets failed the training program.

Then a University of Southern California psychologist named J. P. Guilford developed a set of tests that measured not just IQ but the specific

intellectual abilities required to perform the tasks of a pilot, such as risk assessment and navigation. Failure among training cadets plunged to 1-in-20.

Guilford expanded this successful experiment into what he called the Structure of Intellect, a model that identifies 90 different intellectual aptitudes. They are based on the premise that we all are either figural,

semantic or symbolic learners.

Figural learners process information best by concrete pictures—say, an image of a hand with five fingers to relate the notion of "five." Semantic learners process that information verbally—the word "five" spelled out or spoken. Symbolic learners do better focusing on a symbol, like "5."

The type of learner we are affects the means by which we memorize things, evaluate and classify information, the way we solve problems, even the means of our creativity. Can this insight be turned to practical use? An Annapolis, Md. startup, Intellectual Development Systems, thinks it can. The two-year-old firm uses an updated version of Guilford's model, called Bridges, to help identify the intellectual strengths and weaknesses of 75,000 kids in 150 public schools across the country, then uses that information to speed up their learning.

One must treat claims of educational breakthroughs with a certain skepticism. The new math of the early 1960s, the open classroom of the 1970s, the recently popular Whole Language method of teaching reading—all these pedagogical fads failed to live up to their early promises. "Bridges sounds to me like it's very faddish, and they want it to be, so they can hit the jackpot," says Peter Cookson, Director of the Center for Educational Outreach and Innovation at Columbia University's Teachers College. "But I would not expect this to stick."

Still, Intellectual Development Systems may be on to something. At least it has no shortage of anecdotal evidence to support the Bridges program.

Amber Maloy, 15, of Paris, Tex., was a student who scored As and Bs but repeatedly fared poorly on standardized reading comprehension tests. She passed to higher grade levels largely on her ability to memorize information and on the confidence her teachers had in her.

Then last year Amber's school, Paris High, introduced Bridges. Along with more than 300 other students, Amber took over three hours of tests. The tests showed that she was a symbolic learner but had trouble with figural learning.

So in addition to her regular

classes Amber went twice a week to a Bridges lab at the school. There Amber walked back and forth on a small balance board while simultaneously reading a colored eye chart on the wall. To hone her comprehension of words and their meanings, she used workbooks dealing with synonyms and related meanings of concepts. A year later Amber is a sophomore honor student who talks happily about some day becoming a doctor.

The testimonials go on: A 14-year-old boy in Paris had trouble reading; his eyes weren't able to track lines left to right. His problem is being corrected with exercises that strengthen control of his eye muscles. One of his female classmates, also 14, did badly reading maps; she tries to improve her symbolic learning with exercises that look like a hybrid of crossword puzzles and mazes; she claims she's doing much better.

Stories like these are heartening to William E. Brock, 68, who founded Intellectual Development Systems and is one of its largest shareholders. Brock, a former U.S. senator from Tennessee and an heir to the Brock candy fortune—together with private investors—has put \$2.7 million into IDS so far.

Beyond anecdotal evidence, is there any proof that these mental exercises work? Brock says that each of the schools using the program has documented significant increases in achievement, reduced referrals to special education programs and even reduced disciplinary problems.

Dorothy Sisk, an educational psychologist with Lamar University in Beaumont, Tex., recently evaluated the program in Paris. Her results showed that kids who were enrolled only in the Bridges program tested between 5 and 19 points (out of 80-90 points based on grade level) higher on standard tests than compa-



Elementary school kids performing exercises in their Bridges lab
"We aren't real sure what all goes on, but it works."

parable groups of students who were enrolled in multiple remedial programs, including Bridges. "We aren't real sure what all goes on," says Sharon Yerby, an elementary teacher for 11 years in Paris. "But it works. The kids are improving in class."

Travis Junior High teacher Kay Holleman is moved to tears talking about it. Holleman taught English, science, speech and physical education for 28 years before becoming a Bridges specialist. "[Bridges] not only opens up physical and academic problems, but it also lays open the heart of why these kids are struggling," she says. "Before, it was very difficult to [see] an area of weakness in a child. Now I can see it."

That the program inspires teachers is one reason Brock is confident Bridges will succeed in the education marketplace. He has priced the prod-

uct to move. The fee for the assessment tests, the computer software to analyze test results, workshop materials and supplies for the lab is \$7,500, plus \$54 per student per year. Schools that buy tend to find the money in whatever budget they have already set aside for special education—the costly programs, that is, for helping students with learning disabilities. The Paris School District will spend \$360,000 on Bridges programs for its six schools next school year.

There are plenty of doubters, however. Howard Gardner, of Harvard's Graduate School of Education, agrees that there are multiple intelligences (spatial, linguistic, body kinesthetic, logical mathematical, musical, inter- and intrapersonal and naturalist). Gardner believes that individuals differ in their particular intelligence profiles. But he is not persuaded that mental exercises using mazes and hand-eye coordination and the like can make a difference in learning. "The skills [taught by Bridges] are

a grab bag of abilities that are relevant for book- and workbook-oriented school activities. In fact, most of the exercises would be found in any booklet that attempted to train test-taking skills in students," says Gardner.

Brock's company has yet to make money but has logged \$1.2 million in revenue this year from Bridges programs in 16 states. It has also expanded its program to include sessions for prisons and welfare-to-work programs.

It could be just a placebo effect, but there is a certain contagion for learning that Bridges inspires. Dorsha McCurley, Amber's 37-year-old mother, is a high school dropout who once worked as a convenience store clerk. She is so excited by her daughter's progress that she wants to go through Bridges herself. "I want to go back to school," she says. "Isn't it wonderful?" coos Brock. ■